1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

more correct name would be *yele mauli*. Many informants were repeatedly questioned about this soul trap, separately and together, and all agreed that Gill must have confused a bird trap or bird noose which he saw hanging to a tree with the story he heard of the *matapili* noose in the Underworld. One type of bird noose, *yele manu* (fig. 4,*b*), consisted of loops of sennit suspended from a *puka* tree. It is significant that Gill talks about a birdlike representative of a soul passing into the *ere vaerua*. It is likely, I think, that in order to blacken the past, a convert made for Gill what he said was a soul trap. From the old chant, "Maka taku kupu ko te tonoanga", informants quoted the following phrases to confirm their point that the noose was used in the Underworld only:

Na yelen ko te talakelake	You were tied to the *talakelake* tree
Wakawiwi ake te mauli, koa mate, koa elo	(Your) soul was tangled (in the trap), died, stank,
Wakatautili ai taua i te pu o te puka a Tangi,	We were both thrown to the foot of the *puka* tree of Tangi,
Wakaulu ko te wale pootini . . .	Entered the house of a thousand posts (the house of Leva) . . .

If the soul trap was really an instrument of witchcraft, as Gill was assured, then it acted through the force of suggestion. The priest did not work over the insect or bird that passed through the noose with incantations in order to provoke sickness or death.

Several informants were questioned on different occasions as to their knowledge of black magic. Examples of black magic in western Europe were adduced to give them confidence, but even this lead got no results. Even if informants have willfully forgotten material on sorcery which must to them smack of heathen practices, one might expect some survival of precautions directed against sorcery in the treatment of objects closely connected with the person. But the Pukapukan customs governing the disposal of objects charged with high personality tension, as compared with customs elsewhere in Polynesia, where fear of sorcery led to rigorous tapus or the disposal of such objects, indicate that there was extremely little fear of sorcery in Pukapuka:

> The sea took care of adult excreta, and of most child excreta; no precautions are taken today to dispose of excreta of children too young to go to the sea. Adults expectorate anywhere. Finger and toe nails are cut anywhere; formerly they were bitten off and spat out onto the ground. According to informants, the hair was rarely cut during life, and was worn long by both sexes. Some informants said that hair clippings were buried; others said that hair was often cut from a dead person, particularly from the head of a deceased favorite child, and the hair plaited into a malo or else into a cord by which pearl-shell ornaments were hung on the breast. Formerly, if a woman's hair fell into food, the food was considered spoiled by this contact. When a tooth pained, it was pulled out, taken to the god house of the lineage and deposited there with a prayer to the god of the lineage that he send a new tooth to replace the one thus given to the god. Old clothes were burned or used as rags. Today clothes are worn to rags

1. [See p. 64, category 116—and lyst.]

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

In case of severe illness where neither treatment nor consultation with the gods seemed to help, the medicine man might recommend holding a general confessional over the sick person. He might also recommend in a case of difficult childbirth that the parturient mother confess. (See p. 273.) The object of the general confessional was to bring to light concealed sins among the patient's relatives, sins which might be retarding recovery, or for which the sick person might be suffering. The confessional survives today. We were present at one held over a sick child, an only son, aged ten months, in a family of girls:

> In the evening at about seven o'clock all the relatives, both close and distant, gathered in the small house of the parents. Outside were grouped all the people of the village, together with many people from the other two villages. Many brought mats with them, upon which they lay; others lay on the bare ground. All age groups were represented, as well as both sexes. The mother sat in the middle of the group inside the house, with the closer relatives grouped around her. She held the sick child on her lap, but did not participate in the "confession". Above her head a lamp burned, and by the lamp hung the old sennit malo that the child would receive should it live to maturity.
>
> The "confession", conducted by the principal males present, consisted in reiterated pleas and challenges directed by each man in turn to the other men and to the mother, urging them to confess what they had of evil in their hearts; suggesting that the child was sick because relatives had bad hearts (*ngakau kino*) and he could only get well when, and if, all the evil was confessed away from their hearts. No one actually confessed his sins aloud before the assembled community, but presumably each did so in the secret recesses of his heart. When one man stopped his urgings, another took up the plaint, and the arguments were bandied about the group without cessation. The crowd outside the house just listened, for the most part silently; some carried on conversations in low voices, and the inevitable flirting went on between the young men and women on the outskirts of the group. The "confession" was kept up all night, though the spectators drifted away at a late hour, leaving only the relatives to carry on.
>
> All was in vain, however. The baby died early the following morning; and the death was attributed in part to the fact that some among the relatives had not cleared their hearts as fully as was desirable.

PHYSICAL THERAPY

Though dependent upon the suggestions of the god for confirmation of diagnosis and ideas of treatment, the Pukapukan medical practitioner had, and still has, at his command a number of effective empirical techniques. My information is from Pau, today the foremost medicine man in Pukapuka. His treatments in general seem to follow native patterns, but he has probably borrowed (how much it is hard to tell) some of his rationalizations and practices from European knowledge. The practice of *lomilomi* (deep pressure) is the outstanding method of physical therapy:

> Pau's theory is that pressure on a vein (*uwa*) close to the seat of pain, in *lomilomi*, cuts off the blood vessels from the source of irritation, and thus prevents bad blood from flowing along the vein to the affected part. Formerly it was believed also to cut off the disease object from the seat of pain so that it could be removed.
>
> The two movements of *lomilomi* are: *puka* (deep pressure) or *tumu* (gentle pressure), pressing with one finger on the affected vein; and *unhawle* (to travel), placing

1;Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

the thumb on the vein and then with deep pressure, moving it slowly along the vein outward. Both movements are applied in all types of sickness, on all parts of the body, for every type of pain. Even in inflammation of the breast in a nursing mother, *lomilomi* is applied to relieve congestion or allay pain. Only the inexperienced person indulges in general rubbing movements over the whole body and on places remote from the source of pain. Massage, in the conventional sense, is never used by the expert medicine men, who concentrates on deep pressure over the seat of pain. There is no use of chanting either to assist the rhythm of pressure or magically to increase the efficacy of the technique.

Deep pressure and thumb movement are further applied for the relief of pain as follows:

Strains and sprains. The limb is explored with the fingers to determine the part of greatest swelling; deep pressure is then applied to this spot while the patient moves the limb at frequent intervals.

Pain in the middle of the forearm. Deep pressure is applied to the blood vessel in the upper arm; then the thumb is pressed along the pulse artery in the forearm, from the proximal to the distal portion of the limb, thus rubbing the sickness to the fingers, and ultimately from the fingers into the air. An added treatment is the application of a suitable medicine to the wrist and then pressing toward the wrist in such a way that the sickness is conveyed to the wrist and there absorbed by the medicinal application.

Short breath (*ao potopoto*). Shortness of breath resulting from overwork is diagnosed as due to violent pounding of the heart. Deep pressure is applied to the right top and left top of the abdominal cavity. This is believed to relieve breath tension, but no effect on the blood flow is recognised.

Headache (*tinga te ulu*). Deep pressure is applied to the nape of the neck (the effect being presumably to paralyse the nerve centers in this part of the body).

Constipation (*tutui pukapuka*) and diarrhea (*tutuji*). Deep pressure is applied to the colon (in the one case to relieve strangulation, in the other to assist the process of adjustment).

Stomach pain (*tinga te manava*) including mild appendicitis. Deep pressure is applied to the part of the abdomen affected.

Filarial swellings (*maki hinokino*). For swellings of the foreleg, for example, deep pressure is applied to the thigh and is followed by thumb *wehetele*.

Formerly, a medicine man might perform the pigeon-sounding ritual (*lupe*) before beginning the *lomilomi* and at frequent intervals during the course of the treatment, with the idea of introducing the power of the god into his fingers and of retaining it during the treatment. This method was not common; its use depended on the personal choice of the medicine man and on the severity of the sickness. When he did this, bystanders would say: "Ka yopukia e te atua i te lima" (The god will seize the hand).

Broken and dislocated bones are treated by empirical means, supported formerly by communication with the god if complications set in. A fractured bone is *ivi nuti*; to set a fracture is *wehetou*. The technique was illustrated by Pau only for a broken forearm, a dislocated elbow, and a dislocated jaw, though undoubtedly he has a reasonably good technique for dealing with every type of limb dislocation or breakage:

The medicine man grasps the broken limb with his two hands, the two thumbs on opposite sides of the upper part of the limb, the fingers of both hands holding the limb

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

752 below the fracture. The fingers pull apart the lower part of the bone, firmly and surely, while the two thumbs press (*yoka*) the two broken sections so that they fit firmly together. Then the downward pressure is relaxed and the broken sections pushed together. A cooling medicine (*tui lakau*) is applied to the broken section, coconut sheaths are placed on both sides of the limb to act as a splint (*lakau makayako*, stick to make straight), and the whole bound up with sennit. To prevent movement, the arm is slung in a simple sling (*ava*) made of a piece of pandanus mat, an old malo, or a line of sennit which is passed under the arm and fastened over the shoulder. For sleeping, the arm is removed from the splint and rested on a pile of mats at the patient's side. Every two or three days fresh medicine and new splints are applied to the fracture. There was no disease object to be removed from such an injury, though the god was believed to have caused the slip which resulted in the fracture. Native doctors are expert at setting fractures; the limb apparently always knits well.

For an injury to the elbow (presumably a dislocation), termed *wonenga teka* (section out of position), the arm is straightened out, the forearm pulled steadily in a distal direction, the joint pushed in with a steady pressure of the two thumbs and guided back into place. For a similar injury to the jaw, the thumb is pressed in on the angle of the jaw. The mouth of the patient is opened wide until the knuckles of the jaw joint are close in position. Then with a firm pressure of the thumb, the bones are snapped back.

The three cooling medicines used are: drinking nut liquid; *lolo* cream wrung from raw or baked coconut scrapings; and the juice of pounded ripe bananas. The theory in the use of this medicine is that it purifies the blood round the injured part, keeps the fracture cool, allays inflammation, and thus promotes healing. A cooling medicine is applied only if there is much inflammation or pain. *Lomilomi* may be applied later if stiffness is apparent.

751 Besides *lomilomi*, other physical therapy techniques include sweating, sun and water treatment, and lancing. Forced sweating is used for fever only. Fever is *maki awukele*; sweat is *ta*; to sweat, *pupu te ta*. In cases of fever, the source of pain is treated with *lomilomi*. Drinking nuts are heated near a fire, and the patient is given the hot liquid to drink. He is also covered with several layers of mats to promote sweating. There is no known use of a sweat or steam bath to promote excessive perspiration.

General debility marked by pronounced weakness of the stomach and heaviness in the arms and legs was called *maki taewaiwa* (heavy sickness). It was treated with frequent cold, fresh or salt water baths, the external application of hot coconut liquid, or occasional sun bathing. The god might recommend a cold bath for one patient and a hot bath for another; hence it was impossible to establish general uses of these agents. To heat water the tops of green drinking nuts are split, the coconut liquid poured off, and the nuts filled with cold water are placed on hot coals. When the water is hot, it is poured into a wooden bowl. It is then laved over the patient with cupped hands.

752 Pukapukan surgery seems to have been backward in its development. The only record or knowledge of post mortem examination is in the stories 763 of Watu-manava-nui and Uyo. The dead bodies of these two supermen were opened up after death in order to find out the cause of their exceptional physical abilities. The gods seem not to have suggested to the medicine men

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

any method of removing disease objects by opening up the body. Nothing is known of amputation surgery, nor is there special treatment for shattered or gangrenous bone.

In the case of suppurating flesh, boils, or ulcers, the infected part is opened with a lance (*pao*) of shark tooth, and the blood and pus allowed to drain off. To remove the bad blood in filarial swellings, the skin is pierced and the liquid drained off into a coconut shell. The same limb is lanced on successive occasions until the swelling subsides. Today a nail or a piece of glass is considered more efficient than a shark tooth. In lancing ulcers or boils (*kiko papala*) no attempt is made to keep the incision open so as to drain off the pus (*pe*). The hole closes naturally and is reopened after a few days. Nothing is known of trephining, nor is there ever intentional opening of vein or artery for bloodletting. Cautery was unknown. In effect, Pukapukan surgery is extremely undeveloped as compared with another western Polynesian community such as Vaitupu (19, pp. 236-246).

The Pukapukans had little knowledge of dental surgery. They practiced extracting only when a tooth was loose enough to be removed easily with the hand. Toothache (*tinga te nio*) is common today; a favorite remedy is the application of salt or the insertion of a piece of plug tobacco in the cavity. Formerly, the mouth was rinsed out with salt water at frequent intervals, or the cavity filled with a piece of coconut fiber soaked in salt water. Two other remedies are: pound up the leaf buds of the *puka* tree and add to them fresh water or drinking nut liquid; soak a piece of coconut stipule (*kaka*) in the liquid, and pack the material round the affected tooth and gum. Alternately, pound up a segment of the stalk of the banana tree and then tease out the fibers to make a flat surface, apply this to the tooth and gum. Foreign particles stuck between the teeth are picked out with a section of coconut leaflet midrib (*yukiyuki na nio ki te tuaniu*).

For earache, the meatus is explored with a bird quill or a chicken feather (*yokayoka ki te wulu manu*) in an effort to dislodge excessive wax. Specks in the eye (*mata pepe*) are removed by a second person who turns down the lid and blows into the eye. If a cramped foot falls asleep or is affected by pins and needles (*vae matakelekelea*) small stones are inserted between each toe and left there until relief is obtained. Cramps in the hand or arm are relieved by cracking and snapping the knuckles of the fingers (*wakiwaki na mangamanga lima*).

The following texts are records of the powers of two men who combined the offices of medicine men, priests, and seers, and who appear to have been particularly skillful in the treatment of some of the disorders just mentioned:

1. Tamau was a Malfwata man. He was a seer, a man with special powers. These were the things he saw: medium-sized fish; when he clapped his hands, the hand was filled with the medium-sized fish. He clapped his hands, saw all the properties of the

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

ghosts. These were their properties, talo, sickness causing knots, malos, trees, flowers.

Tamau was a priest of Te Laupapa. When he came from Wale to Motu Ko, he looked, there the *kuga* fish lay, they were cooked. He took them, ate them. The *tairu*, the *vete*, the *eumini*—all the fish had been cooked, they were grilled by his god. That was his power of his magic.

This was another: the treating of sickness. If it was a broken arm, he tapped it with his hand, it was all right. If a broken leg, he touched it with the hand, well. If an injured eye, he touched it, well. If an aching stomach, he hit it, well. There was no medicine which he prepared for drinking. It was only his hand. That is all.

2. Walieu. Walieu was a man of Loto. Ngaliyeyen was his god. His magic power was fire. He did not extinguish the fire. It simply burned thus. If the fire went out, his power was lost. The sick people would gather at his house. He would pray to his god. Indeed all the sick people became well. These were the various illnesses. The person obsessed by a spirit would be cured. The person with the very bad illness (swollen parts) would be well. The person whose sickness was shortness of breath would be cured. All the sicknesses absolutely would be cured. Similarly with the small fish, the *malesile*, the *eve*, the *wuti kuru*, the *we*, the *kaloma*, the *atule:* when he clapped, the small fish rushed to him. There: that was his magic. That is all.

Certain afflictions are treated by the application of embrocations or by internal medicines. The use of medicines is always accompanied by a tapu against the eating of fish until the sickness is completely cured. The tapu applies whether the disease treated is consumption or filaria. No rationalization could be given to account for the incompatibility of fish diet with medicines, but the rule is always rigidly enforced. To yield to a temptation to eat fish during convalescence is to cause a relapse.

No record remains of old-time postures or practices in the drinking of medicines. It is possible that formerly special rules governed the collecting of herbs for medicinal purposes, but this is only a vague memory today.

The following remedies for various illnesses used by Pau are probably generally followed by other practitioners, but each medical man today has his own trade secrets which he jealously guards:

Boils and inflammations. Scrape the bark off the roots of the *tausakomako* plant. Mix the bark with grated dried coconut; then stir in a little coconut liquid. Apply the medicine as a poultice (*eeuna*) to the inflammation, cover with leaves and allow to remain thus overnight. In the morning, the boil will have come to a head. Tear off the top of the boil with the fingers and drain off the pus. Dress the sore with juice squeezed from the pounded stalk or leaves of the *tausakomako* plant and cover with leaves to protect from cold and insects.

Constipation. Express the oil from the grated, dried coconut, add an equal amount of heated drinking-nut liquid, and allow the patient to drink about one-half pint of this at a time. If necessary, follow up with another purgative composed of grated drinking nut flesh mixed with equal amounts of *lolo* cream. Amount of any medicine was judged by the eye. A coconut shell served as container. The enema was not used.

Consumption (*suahi tutule*, wasting-away sickness). Express the oil from grated dried coconut and mix with an equal amount of heated drinking-nut liquid. Let the patient drink about one-half pint of this medicine which acts as a violent purgative. Follow up with a second medicine: graze the edible husk from the top of any coconut, add water, and squeeze out the liquid from the flesh. Let the patient drink two or three swallows of this liquid twice each day. Diet is especially important in cases of consump-

1:Beaglehole and Beaglehole E-5 (1934-5) 1938 Pukapukans

757/278 tion: the patient eats only nuts, pandanus fruit, and bananas; talo is later added to the diet, but fish or flesh is tapu as long as medicine is being taken.

Debility of patients grown thin and weak through prolonged illness. Place the liver of any large, edible fish in a green coconut cup, cover with water, and warm over hot coals. When thoroughly hot, remove and throw away the liver. Pound up several lengths of aerial pandanus root, squeeze out the juice, and add to the liver water. Let the patient drink this each day. The same medicine is used for renal colic.

Diarrhea. Bake ripe pandanus keys, extract the nuts, and pound up. Express the juice. To each half cup of juice, add a little dried coconut oil and fresh water. Drink the mixture at intervals until cured. A diet of pounded cooked talo mixed with drinking-nut liquid is also recommended to calm the stomach.

Filaria. Pau would only say that the main treatment consists in *lomilomi* and lancing. However, some practitioners paint an embrocation on the affected limb. The ingredients of such an embrocation are a closely guarded trade secret, but probably consist of a coconut oil base to which pandanus juice is added. Trade perfume is considered to have great virtue as an addition to such a mixture. The embrocation is applied until the swelling begins to subside. After that, nature is allowed to take its course, unaided by external applications.

Hemorrhage. External bleeding of a limb is treated by winding a length of malo or sennit round the limb about the wound and tying tightly. If bleeding occurs in a place where a wrapping may not be easily applied, deep pressure with the thumb is exerted above and below the wound. Either of the two following astringents is applied to the wound: juice squeezed from the husk of a coconut, or juice squeezed from the pounded roots of the coconut tree. The wound is covered with leaves of the *nonu* plant and tied with sennit. For external bleeding after childbirth and for internal bleeding, vomiting of blood, or passing of blood with the feces: express the oil from the gratings [844] of a very red dried coconut; squeeze the juice from pounded, baked, ripe pandanus keys, and mix the two liquids; add drinking-nut water to make about two gills of liquid; let the patient drink this at intervals until bleeding ceases.

Stomach pain. Pound raw or baked bananas, mix with *lolo* cream and drinking-nut liquid. About one-half pint of the medicine is drunk at intervals until the pain ceases.

Rheumatic pains (*maki ngungu*). These are treated with *lomilomi* and an embrocation: grate a dried coconut and add to it four or five leaf buds of the *taryinu* tree; pound up the mixture and express the juice onto the source of pain. Other leaf buds may be substituted, but those of the *taryinu* are preferred.

Vomiting (*hua*). As an emetic, drink salt water. To allay excessive vomiting, drink about one-half pint of the internal hemorrhage medicine, until vomiting ceases.

Insomnia (*ongo moe*). Pau mentioned this as an occasional complaint, but had no specific treatment.

192/826 A vocabulary of about 200 words covering physiological processes and parts and bones of the body was also obtained from Pau, who was shown pictures of different parts of the body, diagrams of a skeleton and the skull, and asked to identify the parts he knew. These words are included in the Pukapukan dictionary.

145/856 Imperfect and irregular teeth (*ngao oyo*) are believed to result if a child loses his milk teeth before the second set is ready to erupt, for the child tends to play with his gums (*tuke nio*), so spoiling the second set. Many young children, aged 3 to 5 years, have badly broken or decayed milk teeth. Some have sets of stumps that appear to be worn down through hard chewing. This is an individual matter, however, because other children of the same age have beautiful, well-formed milk teeth.